# PCT

#### D INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:

A61L 2/10, 2/20, 2/18, B65B 55/04

(11) International Publication Number:

WO 99/21593

A1 |

(43) International Publication Date:

6 May 1999 (06.05.99)

(21) International Application Number:

PCT/EP98/06846

(22) International Filing Date:

28 October 1998 (28.10.98)

(30) Priority Data:

97830555.5

29 October 1997 (29.10.97)

EP

(71) Applicant (for all designated States except US): TETRA LAVAL HOLDINGS & FINANCE S.A. [CH/CH]; 70, avenue Général-Guisan, CH-1009 Pully (CH).

(72) Inventor; and

(75) Inventor/Applicant (for US only): MORUZZI, Guido [IT/IT]; Via Venezia, 10, I-40068 S. Lazzaro di Savena (IT).

(74) Agents: JORIO, Paolo et al.; Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).

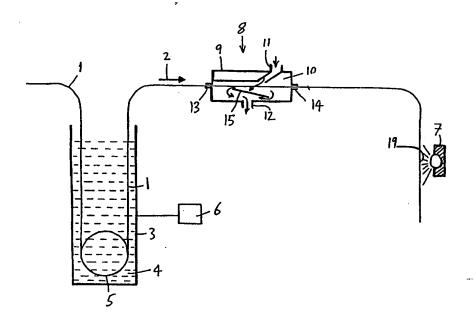
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

### **Published**

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHOD AND APPARATUS FOR STERILIZING A PACKAGING SHEET MATERIAL



### (57) Abstract

The method of sterilizing a packaging sheet material involves the steps of applying hydrogen peroxide to a packaging sheet material, and irradiating the packaging sheet material with light, including at least one UV wavelength between about 200nm and 320nm. The method also has an intermediate step of removing hydrogen peroxide from the packaging sheet material, after the step of applying hydrogen peroxide and before the step of irradiating the packaging material, whereby to target synergy between the UV light and hydrophilically absorbed hydrogen peroxide in any microorganisms present on the packaging sheet material. An apparatus for carrying out the method is also disclosed.